

METHOD AND APPARATUS FOR GENERATING  
AN INERT GAS ON A VEHICLE

Abstract of the Disclosure

An inert gas generating system for generating inert gas on a vehicle having a fuel tank and a fuel tank vent. The system includes an inlet for receiving a flow of gas having a nitrogen component and an oxygen component from a gas source, a heat exchanger downstream from the inlet and in fluid communication with the inlet for cooling gas received from the inlet, and a gas separation module downstream from the heat exchanger and in fluid communication with the heat exchanger for separating gas received from the heat exchanger into a nitrogen-enriched gas flow and an oxygen-enriched gas flow. The gas separation module is adapted to deliver nitrogen-enriched gas from the nitrogen-enriched gas flow to the fuel tank without delivering the nitrogen-enriched gas through the fuel tank vent. The gas separation module is also adapted to deliver nitrogen-enriched gas from the nitrogen-enriched gas flow to the fuel tank vent.